

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A cryptographic apparatus comprising:

plaintext packet receiver for receiving packet data transmitted and received between terminals;

a fragmentation determination unit for making a determination as to whether there is a need for fragmentation of the packet data by computing the packet length when the packet data is encrypted and by comparing the computed packet length with a predetermined packet length;

a fragmentation unit for dividing the packet data into a plurality of divided data groups if it is determined that there is a need for fragmentation of the packet data as a result of said determination, said fragmentation unit setting the divided data groups in a plurality of divided data packets of a predetermined data structure capable of being transmitted to and reconstructed in a transmission destination terminal, said fragmentation unit adding, to each divided data packet, control information for ensuring continuity between the divided data packets;

an encryption unit for separately encrypting the plurality of divided data packets to form a plurality of encrypted packets; and

an encrypted packet transmitting unit for transmitting the plurality of encrypted packets to a decryption terminal;

wherein the plurality of divided data packets include two or more associated divided data packets and the control information permits the associated divided data packets to be transmitted

to the transmission destination terminal independently without waiting for the arrival of any other associated divided data packet; and

wherein a second and any subsequent divided data packet within the plurality of divided data packets includes an additional IP header.

2. (Original) A cryptographic communication system in which packet data transmitted and received between terminals is encrypted by a transmitting-side cryptographic apparatus and is decrypted by a receiving-side decryption apparatus; said system comprising:

a cryptographic apparatus according to Claim 1;

a decryption apparatus which receives the plurality of encrypted packets transmitted from said cryptographic apparatus, separately decrypts each of the plurality of encrypted packets into the divided data packet, and transmits the plurality of divided data packets to a transmission destination terminal in the decryption order; and

a terminal which receives the plurality of divided data packets and reconstructs the divided data groups on the basis of the control information added to each divided data packet to obtain the packet data.

3. (Canceled)

4. (Currently Amended) A cryptographic method, comprising:

receiving packet data transmitted and received between terminals;

making a determination as to whether there is a need for fragmentation of the packet data by computing the packet length when the packet data is encrypted and by comparing the computed packet length with a predetermined packet length;

dividing the packet data into a plurality of divided data groups if it is determined that there is a need for fragmentation of the packet data as a result of said determination, setting the divided data groups in a plurality of divided data packets of a predetermined data structure capable of being reconstructed in a transmission destination terminal, adding, to each divided data packet, control information for ensuring continuity between the divided data packets;

encrypting separately the plurality of divided data packets to form a plurality of encrypted packets; and

transmitting the plurality of encrypted packets to a decryption terminal;

wherein the plurality of divided data packets include two or more associated divided data packets and the control information permits the associated divided data packets to be transmitted to the transmission destination terminal independently without waiting for the arrival of any other associated divided data packet; and

wherein a second and any subsequent divided data packet within the plurality of divided data packets includes an additional IP header.

5. (Previously Presented) A cryptographic method in which packet data transmitted and received between terminals is encrypted according to Claim 1, and is decrypted; said method further including:

receiving the plurality of encrypted packets;

decrypting separately each of the plurality of encrypted packets into the divided data packet,

transmitting the plurality of divided data packets to a transmission destination terminal in the decryption order;

receiving the plurality of divided data packets, and

reconstructing the divided data groups on the basis of the control information added to each divided data packet to obtain the packet data.

6. (Canceled)